

## Claims

- 1      **Claim 1.** A sailing yacht, comprising:
  - 2            a sailing hull;
  - 3            a ballast;
  - 4            a ballast-supporting structure that functions as means for supporting the ballast beneath the sailing hull moveably in order to produce a counter-heeling force that can be varied underway by movement of the ballast-supporting structure; and
  - 8            a ballast drive system onboard the sailing hull that functions as means for moving the ballast-supporting structure in order to vary the counter-heeling force, the ballast drive system including at least two hydraulic cylinders arranged to move the ballast-supporting structure.
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1       **Claim 2.** A sailing yacht as recited in claim 1, wherein a first one of the  
2       two hydraulic cylinders is mechanically connected between the  
3       ballast-supporting structure and a first portion of the hull, and a second  
4       one of the two hydraulic cylinders is mechanically connected between the  
5       ballast-supporting structure and a second portion of the hull.

1       **Claim 3.** A sailing yacht as recited in claim 1, wherein the two hydraulic  
2       cylinders are arranged for parallel operation.

1       **Claim 4.** A sailing yacht as recited in claim 1, wherein the two hydraulic  
2       cylinders are arranged for push-pull operation.

1       **Claim 5.** A sailing yacht as recited in claim 1, further comprising a motor  
2       and pump system operatively connected to the two hydraulic cylinders,  
3       which motor and pump system includes having at least two hydraulic  
4       pumps to provide hydraulic pump redundancy.

1       **Claim 6.** A sailing yacht, comprising:

2           a sailing hull;

3           a ballast;

4           a ballast-supporting structure that functions as means for supporting  
5           the ballast beneath the sailing hull moveably in order to produce a  
6           counter-heeling force that can be varied underway by movement of the  
7           ballast-supporting structure; and

8           a ballast drive system onboard the sailing hull that functions as  
9           means for moving the ballast-supporting structure in order to vary the  
10          counter-heeling force, the ballast drive system including at least two  
11          hydraulic cylinders arranged to move the ballast-supporting structure;

12          wherein in a first one of the two hydraulic cylinders is mechanically  
13          connected between the ballast-supporting structure and a first portion of  
14          the hull, and a second one of the two hydraulic cylinders is mechanically  
15          connected between the ballast-supporting structure and a second portion  
16          of the hull; and

17          wherein the two hydraulic cylinders are arranged for parallel  
18          operation.

1       **Claim 7.** A sailing yacht as recited in claim 6, further comprising  
2           comprising a motor and pump system operatively connected to the two  
3           hydraulic cylinders, which motor and pump system includes having at  
4           least two hydraulic pumps to provide hydraulic pump redundancy.

1       **Claim 8.** A sailing yacht, comprising:

2           a sailing hull;

3           a ballast;

4           a ballast-supporting structure that functions as means for supporting  
5           the ballast beneath the sailing hull moveably in order to produce a  
6           counter-heeling force that can be varied underway by movement of the  
7           ballast-supporting structure; and

8           a ballast drive system onboard the sailing hull that functions as  
9           means for moving the ballast-supporting structure in order to vary the  
10          counter-heeling force, the ballast drive system including at least two  
11          hydraulic cylinders arranged to move the ballast-supporting structure;

12          wherein in a first one of the two hydraulic cylinders is mechanically  
13          connected between the ballast-supporting structure and a first portion of  
14          the hull, and a second one of the two hydraulic cylinders is mechanically  
15          connected between the ballast-supporting structure and a second portion  
16          of the hull; and

17          wherein the two hydraulic cylinders are arranged for push-pull  
18          operation.

1       **Claim 9.** A sailing yacht as recited in claim 8, further comprising  
2           comprising a motor and pump system operatively connected to the two  
3           hydraulic cylinders, which motor and pump system includes having at  
4           least two hydraulic pumps to provide hydraulic pump redundancy.